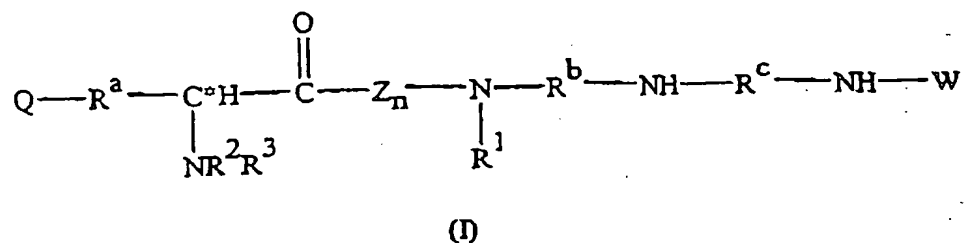


The invention claimed is:

1. A method of treating a mammal to protect said mammal from the neuronal damage caused by an ischaemic event b administering to said mammal before, after or during an ischaemic event an effective amount of a substantially pure compound having the general formula (I)



wherein:

Q represents an amidino group, a cyano group or a group of formula XYN-, where

X and Y are the same or different, and each may represent a hydrogen atom, a lower alkyl group, or hetero-atom containing group or, together with the nitrogen atom to which they are attached, form a nitrogen-containing heterocyclic group;

R<sup>a</sup> represents a straight or branched chain alkylene or alkenylene group having from 1 to 6 carbon atoms and each optionally being substituted by from 1 to 4 alkyl groups each having from 1 to 3 carbon atoms;

R<sup>b</sup> and R<sup>c</sup> each represent an alkylene or alkylene group having 3 or 4 carbon atoms in a straight chain, each being optionally substituted by a 1 or 2 alkyl groups each having from 1 to 3 carbon atoms, the total number of carbon atoms in said straight chains of R<sup>b</sup> and R<sup>c</sup> being 7;

R<sup>2</sup> and R<sup>3</sup> are the same as or different from each other and each represents a hydrogen atom, or a group of formula R, RCO-, ROCO-, or RNHCO-, where

R represents a lower alkyl group or an aryl group, said alkyl or aryl group being optionally substituted by one or more of the substituents  $\alpha$ , defined below;

the chiral carbon atom indicated by the asterisk is in the L configuration;

Z is an aromatic amino acid residue;

n is 0 or 1;

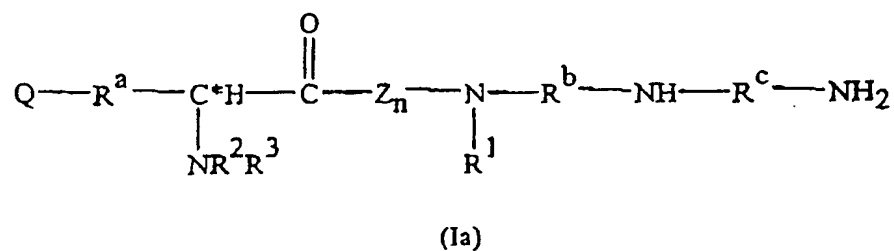
R<sup>1</sup> represents a hydrogen atom or a lower alkyl group or an aryl group, said alkyl or aryl group being optionally substituted by one or more of the substituents  $\alpha$ , defined below;

W represents a hydrogen atom or an alkyl or aryl group; and

substituents  $\alpha$  are selected from: halogen atoms, amino groups, alkylamino groups, dialkylamino groups, cyano groups, hydroxy groups, alkyl groups (except when the substituted group is alkyl), aryl groups, carbamoyl groups, alkylcarbamoyl groups, dialkylcarbamoyl groups and carboxy groups and esters thereof;

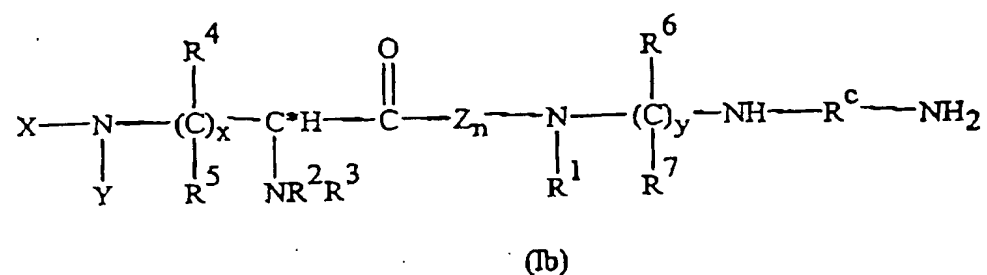
and pharmaceutically acceptable salts thereof.

2. A method according to claim 1, said compound having the formula (Ia):



wherein Q, R<sup>a</sup>, R<sup>b</sup>, R<sup>c</sup>, R<sup>2</sup>, R<sup>3</sup>, Z, n, and R<sup>1</sup> are as in claim 1.

3. A method according to claim 1, said compound having the formula (Ib):



wherein:

X, Y, Z, n and R<sup>1</sup> are as defined in claim 1;

x is an integer from 1 to 5;

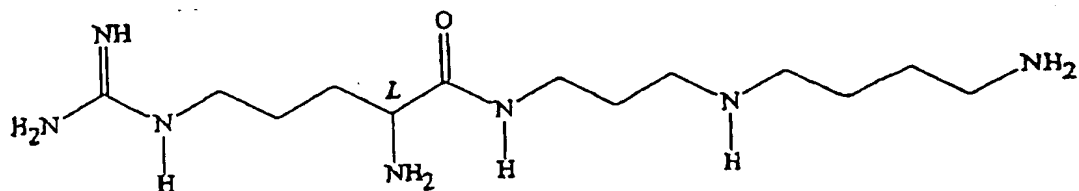
y is 3 or 4;

R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup> may be the same or different and each represents a hydrogen atom or a lower alkyl group; and

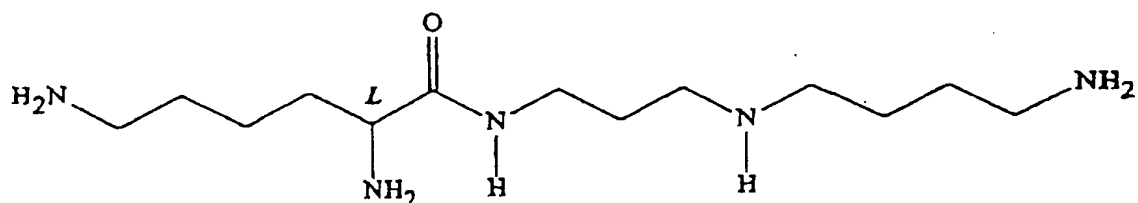
the chiral carbon atom indicated by the asterisk is in the L configuration.

4. A method according to claim 1, in which Z represents an aromatic amino acid residue in the L configuration.
5. A method according to claim 1, wherein said compound is non-toxic.
6. A method according to claim 2, wherein said compound is non-toxic.
7. A method according to claim 3, wherein said compound is non-toxic.

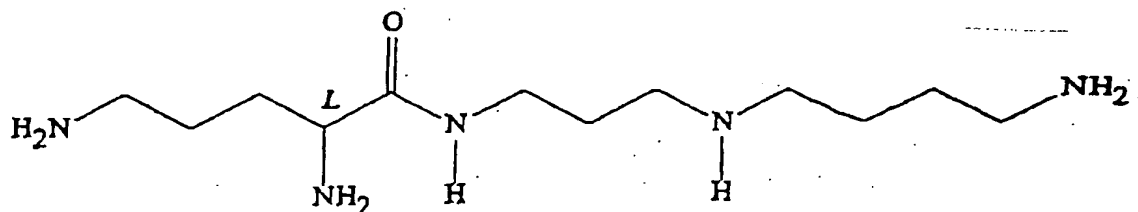
8. A method according to claim 1, wherein said compound is:



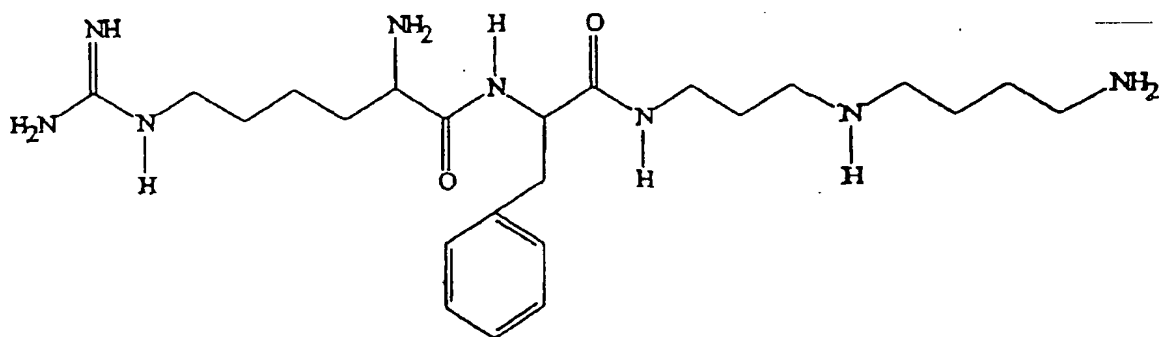
9. A method according to claim 1, wherein said compound is:



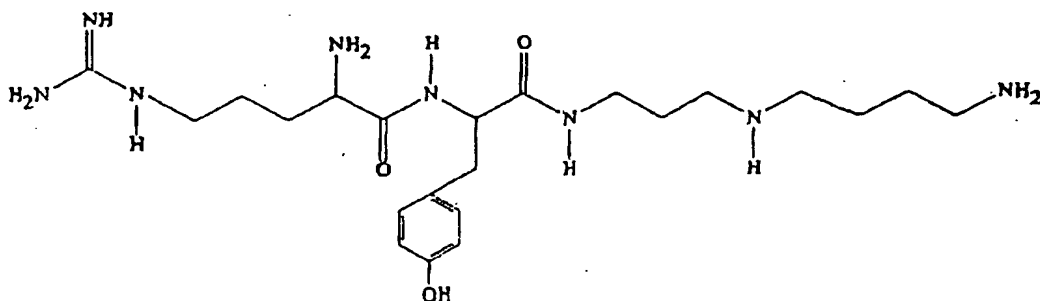
10. A method according to claim 1, wherein said compound is:



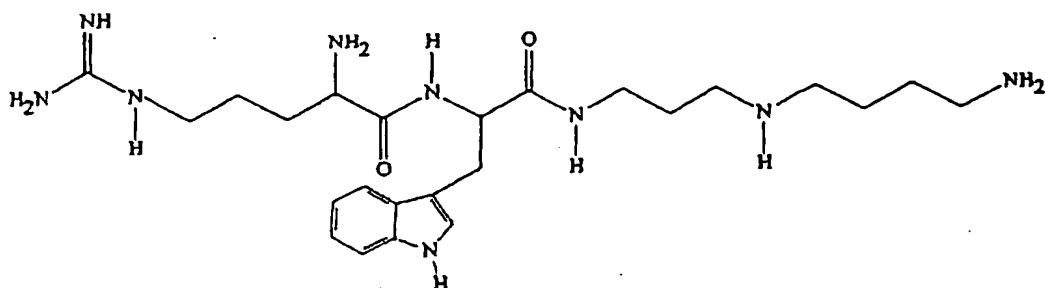
11. A method according to claim 1, wherein said compound is:



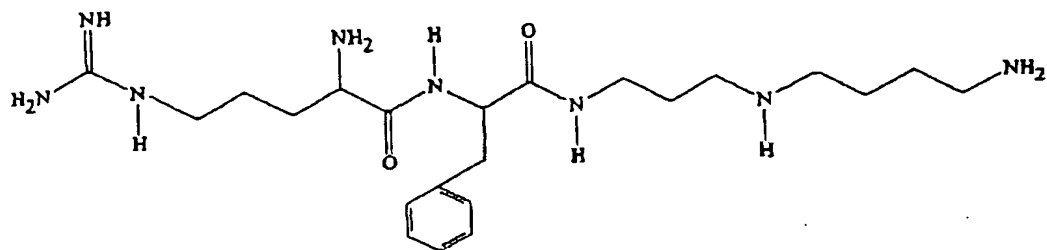
12. A method according to claim 1, wherein said compound is:



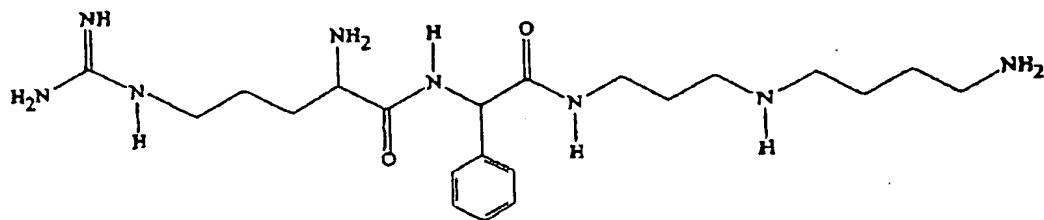
13. A method according to claim 1, wherein said compound is:



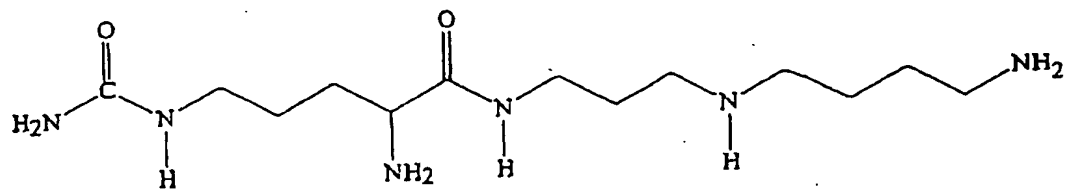
14. A method according to claim 1, wherein said compound is:



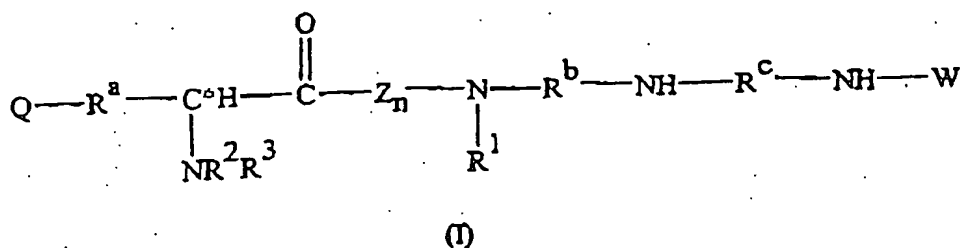
15. A method according to claim 1, wherein said compound is:



16. A method according to claim 1, wherein said compound is:



17. The use of substantially pure compound having the general formula (I)



wherein:

Q represents an amidino group, a cyano group or a group of formula XYN-, where

X and Y are the same or different, and each may represent a hydrogen atom, a lower alkyl group, or a simple hetero-atom containing group or, together with the nitrogen atom to which they are attached, form a nitrogen-containing heterocyclic group;

R<sup>a</sup> represents a straight or branched chain alkylene or alkenylene group having from 1 to 6 carbon atoms and each optionally being substituted by from 1 to 4 alkyl groups each having from 1 to 3 carbon atoms;

R<sup>b</sup> and R<sup>c</sup> represent an alkylene or alkenylene group having 3 or 4 carbon atoms in a straight chain, each being optionally substituted by 1 or 2 alkyl groups each having from 1 to 3 carbon atoms, the total number of carbon atoms in said straight chains of R<sup>b</sup> and R<sup>c</sup> being 7;

R<sup>2</sup> and R<sup>3</sup> are the same as or different from each other and each represents a hydrogen atom, or a group of formula R, RCO-, ROCO-, or RNHCO-, where

R represents a lower alkyl group or an aryl group, said alkyl or aryl group being optionally substituted by one or more of the substituents  $\alpha$ , defined below;

the chiral carbon atom indicated by the asterisk is in the L configuration;

Z is an aromatic amino acid residue;

n is 0 or 1;

R<sup>1</sup> represents a hydrogen atom or a lower alkyl group or an aryl group, said alkyl or aryl group being optionally substituted by one or more of the substituents  $\alpha$ , defined below;

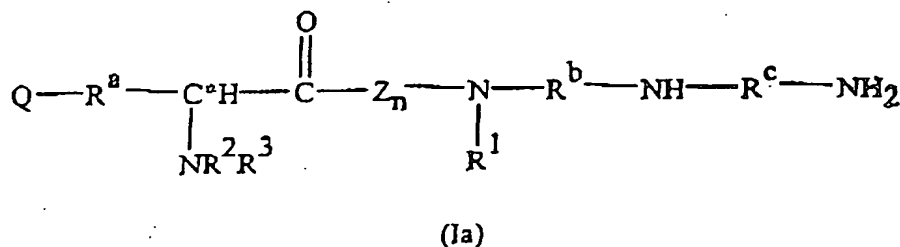
O represents a hydrogen atom or an alkyl or aryl group; and

substituents  $\alpha$  are selected from: halogen atoms, amino groups, alkylamino groups, dialkylamino groups, cyano groups, hydroxy groups, alkyl groups (except when the substituted group is alkyl), aryl groups, carbamoyl groups, alkylcarbamoyl groups, dialkylcarbamoyl groups and carboxy groups and esters thereof;

and pharmaceutically acceptable salts thereof,

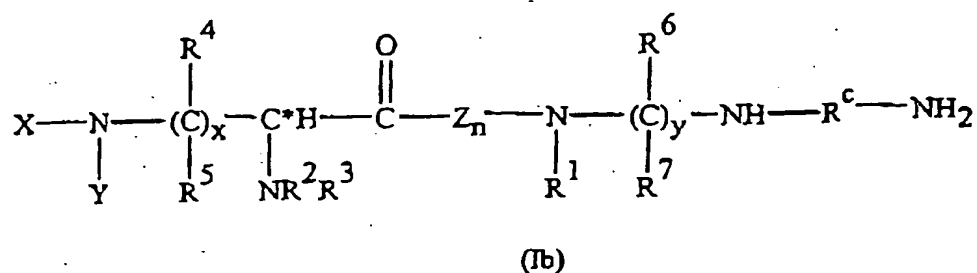
for the manufacture of a medicament for treating a mammal to protect said mammal from the neuronal damage caused by an ischaemic event.

18. The use according to claim 17, said compound having the formula (Ia):



wherein Q, R<sup>a</sup>, R<sup>b</sup>, R<sup>c</sup>, R<sup>2</sup>, R<sup>3</sup>, Z, n, and R<sup>1</sup> are as in claim 17.

19. The use according to claim 17, said compound having the formula (Ib):



wherein:

X, Y, Z, n and R<sup>1</sup> are as defined in claim 17;

x is an integer from 1 to 5;

y is 3 or 4;

R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup> may be the same or different and each represents a hydrogen atom or a lower alkyl group; and

the chiral carbon atom indicated by the asterisk is in the L configuration.

20. The use according to claim 17, in which Z represents an aromatic amino acid residue in the L configuration.

21. The use according to claim 17, wherein said compound is non-toxic.

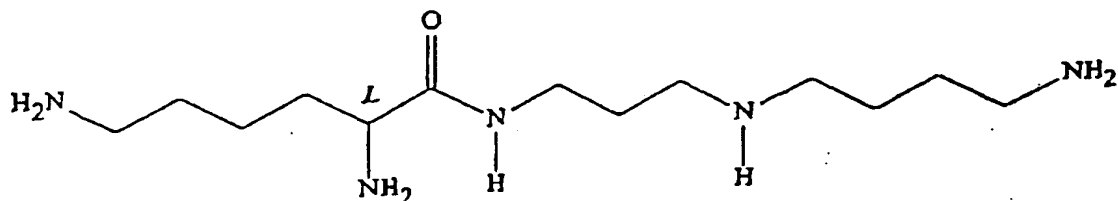
22. The use according to claim 18, wherein said compound is non-toxic.

23. The use according to claim 19, wherein said compound is non-toxic.

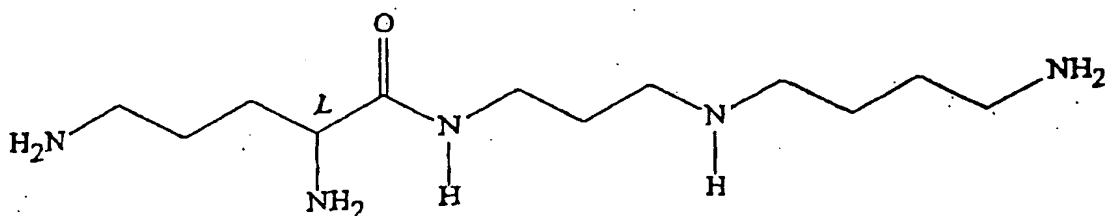
24. The use according to claim 17 wherein said compound is:



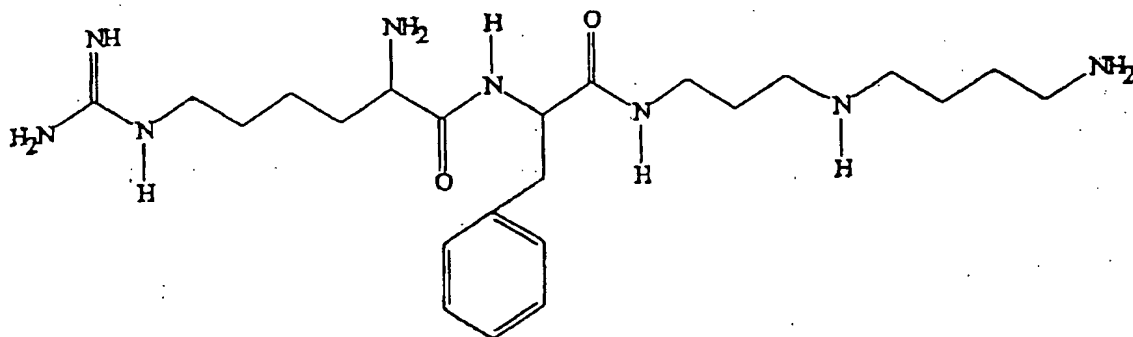
25. The use according to claim 17 wherein said compound is:



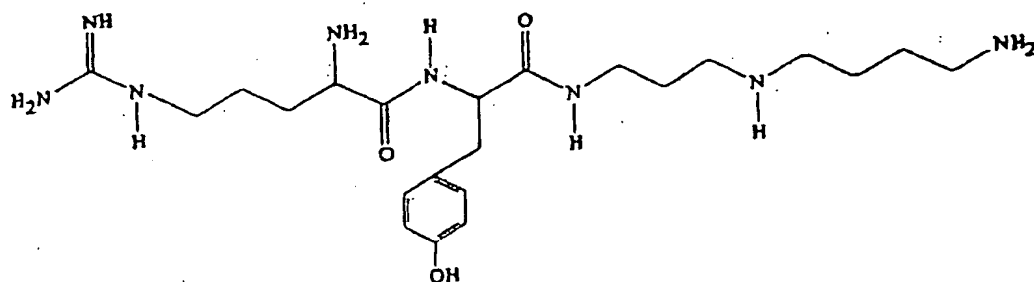
26. The use according to claim 17 wherein said compound is:



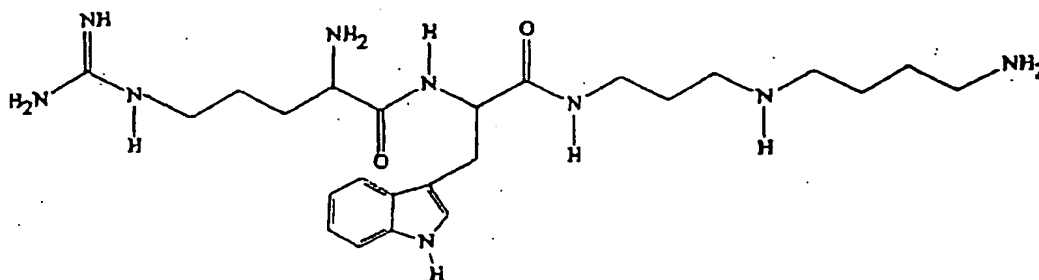
27. The use according to claim 17 wherein said compound is:



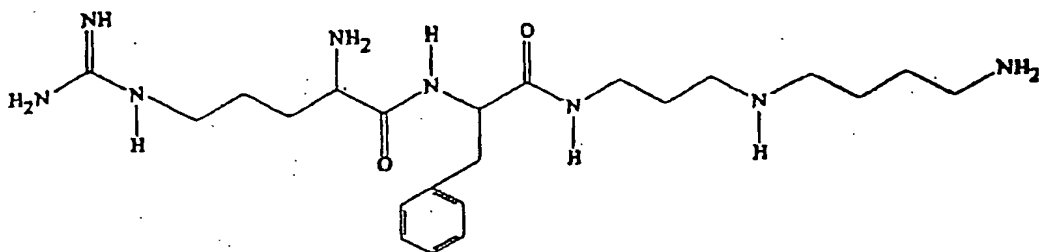
28. The use according to claim 17 wherein said compound is:



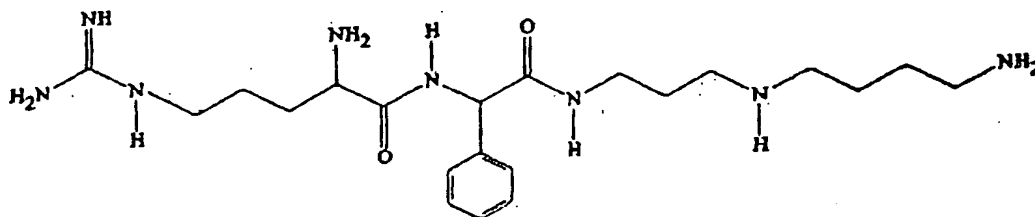
29. The use according to claim 17 wherein said compound is:



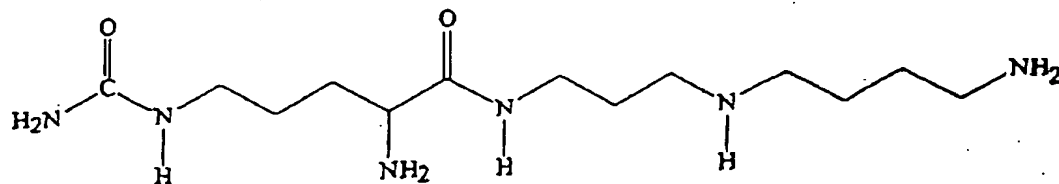
30. The use according to claim 17 wherein said compound is:



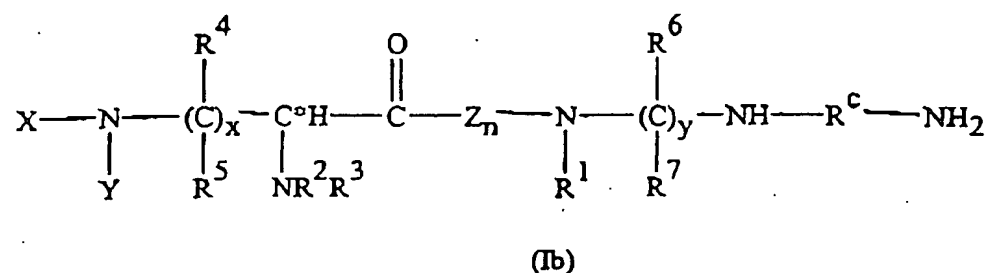
31. The use according to claim 17 wherein said compound is:



32. The use according to claim 17 wherein said compound is:



33. A substantially pure compound having the formula (Ib):



wherein:

X and Y are the same or different, and each may represent a hydrogen atom, a lower alkyl group, or a simple hetero-atom containing group or, together with the nitrogen atom to which they are attached, form a nitrogen-containing heterocyclic group;

Z is an aromatic amino acid residue;

n is 0 or 1;

R<sup>1</sup> represents a hydrogen atom or a lower alkyl group or an aryl group, said alkyl or aryl group being optionally substituted by one or more of the substituents α, defined below;

substituents α are selected from: halogen atoms, amino groups, alkylamino groups, dialkylamino groups, cyano groups, hydroxy groups, alkyl groups (except when the substituted group is alkyl), aryl groups, carbamoyl groups, alkylcarbamoyl groups, dialkylcarbamoyl groups and carboxy groups and esters thereof;

x is an integer from 1 to 5;

y is 3 or 4;

$R^4$ ,  $R^5$ ,  $R^6$  and  $R^7$  may be the same or different and each represents a hydrogen atom or a lower alkyl group; and

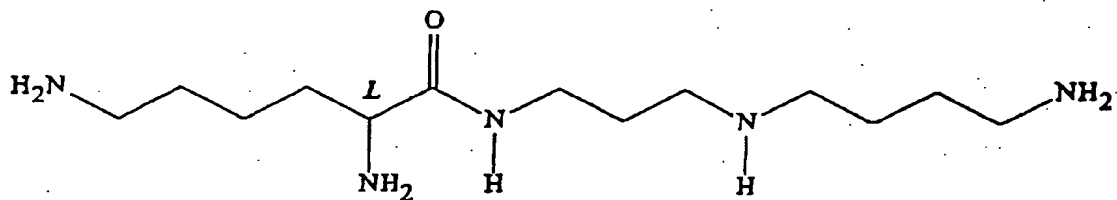
the chiral carbon atom indicated by the asterisk is in the L configuration,

and pharmaceutically acceptable salts thereof.

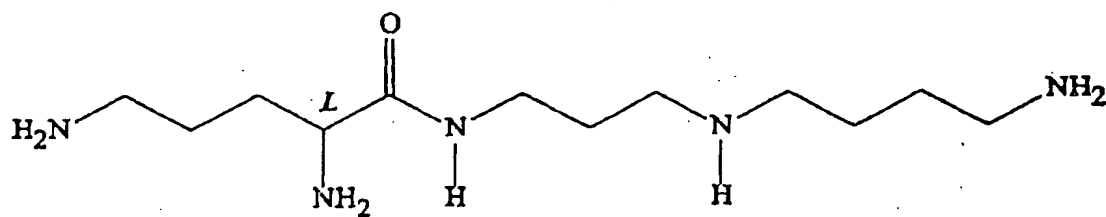
34. Compounds according to claim 33, in which Z represents an aromatic amino acid residue in the L configuration.

35. Non-toxic compounds of formula (Ib) as defined in claim 33.

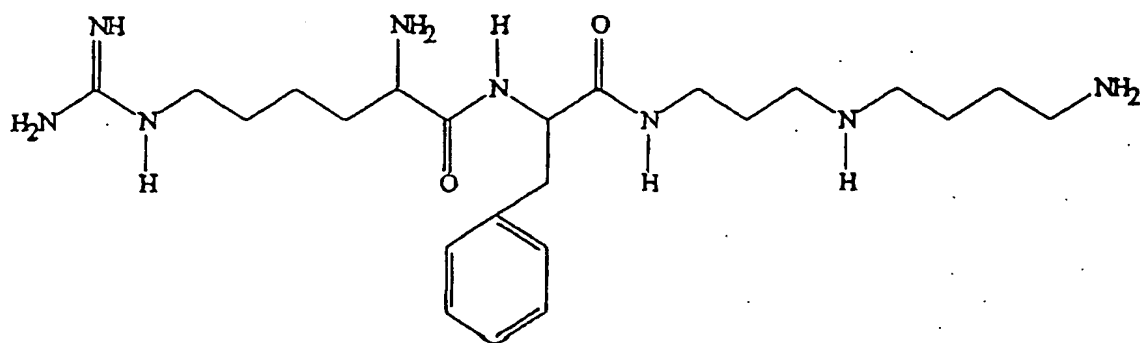
36. A compound according to claim 33 which is:



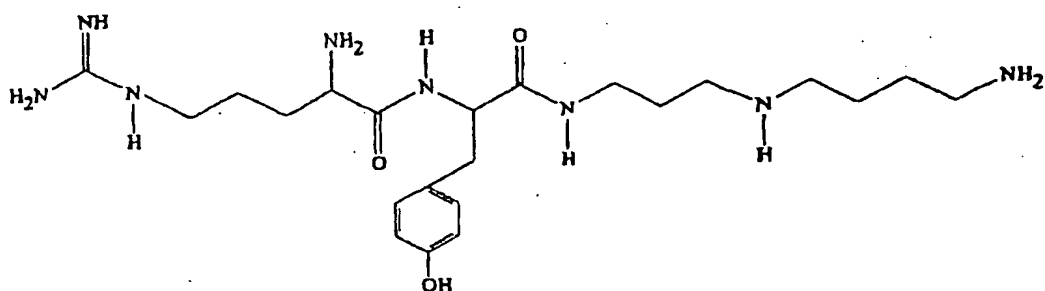
37. A compound according to claim 33 which is:



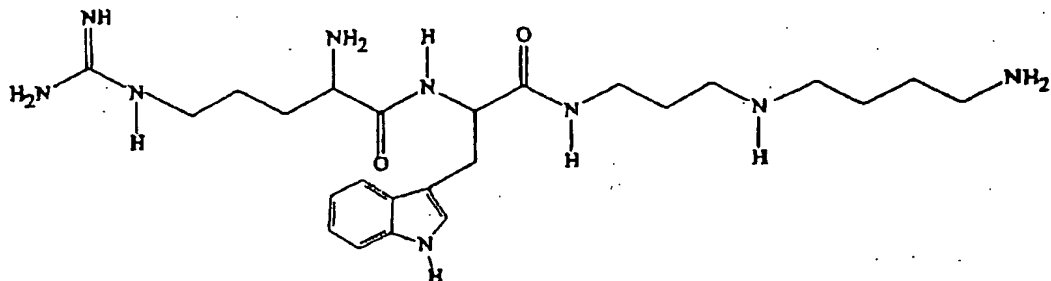
38. A compound according to claim 33 which is:



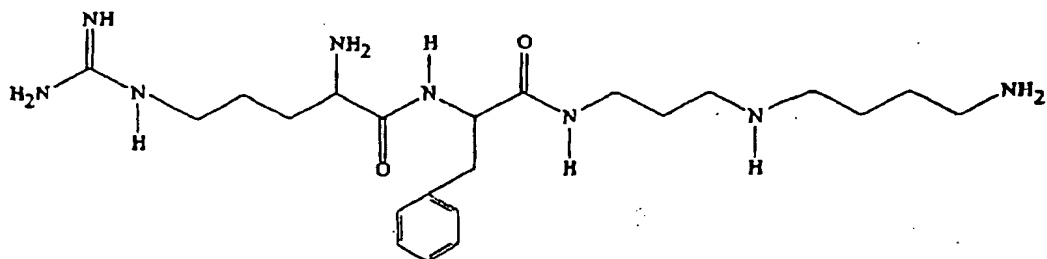
39. A compound according to claim 33 which is:



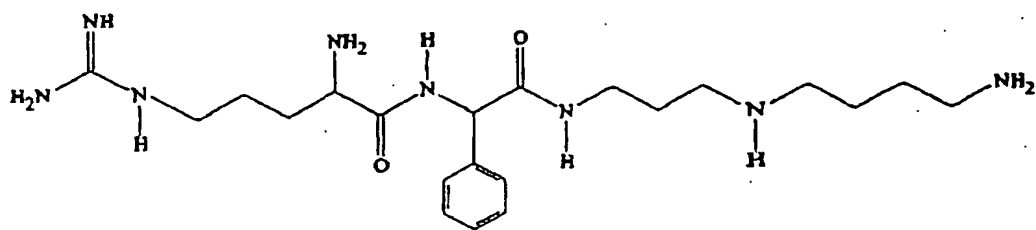
40. A compound according to claim 33 which is:



41. A compound according to claim 33 which is:



42. A compound according to claim 33 which is:



43. A compound according to claim 33 which is:

